SPECIAL ISSUE

RESULTS FROM THE MODEL EVALUATION CONSORTIUM FOR CLIMATE ASSESSMENT (MECCA)

Edited by

T. KITTEL

Climate System Modeling Program, UCAR, P.O. Box 3000, Boulder CO 80307-3000, USA

CONTENTS

Preface
C. Hakkarinen 1
The MECCA analysis project
A. Henderson-Sellers, W. Howe and K. McGuffie 3
Perspectives for regional earth system modeling
F. Giorgi 23
Effects of a $2 \times CO_2$ climate on two large lake systems: Pyramid Lake, Nevada, and Yellowstone Lake, Wyoming
S.W. Hostetler and F. Giorgi 43
Analysis of daily variability of precipitation in a nested regional climate model: comparison with observations and doubled CO_2 results
L.O. Mearns, F. Giorgi, L. McDaniel and C. Shields 55
Seasonal monsoon forecast for the years 1987 and 1988
T.N. Krishnamurti, H.S. Bedi, G. Rohaly, M. Fulakeza, D. Oosterhof and K. Ingles 79
Global climate sensitivity to tropical deforestation
K. McGuffie, A. Henderson-Sellers, H. Zhang, T.B. Durbidge and A.J. Pitman 97
Use of a land-surface-transfer scheme (LSX) in a global climate model: the response to doubling stomatal resistance
D. Pollard and S.L. Thompson 129
A comparison of the CCM1-simulated climates for pre-industrial and present-day CO_2 levels
S. Marshall, M.E. Mann, R.J. Oglesby and B. Saltzman 163
The dependence of the climate sensitivity on convective parametrization: statistical evaluation
B.J. McAvaney, R.R. Dahni, R.A. Colman and J.R. Fraser 181
Low-frequency variability and CO_2 transient climate change. Part 2: EOF analysis of CO_2 and model-configuration sensitivity
G.G. Campbell, T.G.F. Kittel, G.A. Meehl and W.M. Washington 201
Interannual variability of regional climate and its change due to the greenhouse effect
X.-Z. Liang, W.-C. Wang and M.P. Dudek 217